

a) 1 b) 2 c) 3 d) 4

14. Which of the following is not an inherent application of stack?

- a) Reversing a string
- b) Evaluation of postfix expression
- c) Implementation of recursion
- d) Job scheduling

15. If the elements "A", "B", "C" and "D" are placed in a stack and are deleted one at a time, what is the order of removal?

- a) ABCD b) DCBA c) DCAB d) ABDC

16. A linear collection of data elements where the linear node is given by means of pointer is called?

- a) Linked list b) Node list c) Primitive list d) None of the mentioned

17. Consider an implementation of unsorted singly linked list. Suppose it has its representation with a head pointer only.

Given the representation, which of the following operation can be implemented in $O(1)$ time?

- i) Insertion at the front of the linked list iii) Deletion of the front node of the linked list
- ii) Insertion at the end of the linked list iv) Deletion of the last node of the linked list
- a) I and II b) I and III c) I, II and III d) I, II and IV

18. In linked list each node contain minimum of two fields. One field is data field to store the data second field is? a) Pointer to character b) Pointer to integer c) Pointer to node d) Node

19. Consider the following definition in c programming language

```
struct node
{
int data;
struct node * next;
}
typedef struct node NODE;
NODE *ptr;
```

Which of the following c code is used to create new node?

- a) `ptr = (NODE*)malloc(sizeof(NODE));`
- b) `ptr = (NODE*)malloc(NODE);`
- c) `ptr = (NODE*)malloc(sizeof(NODE*));`
- d) `ptr = (NODE)malloc(sizeof(NODE));`

20. What would be the asymptotic time complexity to add a node at the end of singly linked list, if the pointer is initially pointing to the head of the list?

- a) $O(1)$ b) $O(n)$ c) $\theta(n)$ d) $\theta(1)$